

Thank you Debbie. On behalf of the U.S.

Department of Energy, I want to welcome you to the 2008 Superconductivity for Electric Systems Peer Review. Today, over thirty presentations will highlight the accomplishments of DOE-sponsored projects in the areas of second generation wire technology, strategic research, and applications. The peer review process is an important tool for assessing the Superconductivity program's portfolio of projects by evaluating their goals, objectives, strategy, productivity, and leadership. In addition, it affords an opportunity for industry, national laboratories, and the academic community to share best practices, and seek areas of synergy.

We are fortunate to have a world class group of international and domestic-based peer reviewers from the private sector, academic community, and the federal government participating in this review. The 175+ participants here today represent a broad cross-section of attendees from North America, Europe, Australia and Asia. The expertise of these participants is fundamental to assessing the results of this research and I look forward to everyone's comments.

As you know, America's electric system may potentially face serious problems in the future. These problems include aging equipment and infrastructure, uncertain regulations and policies, difficulties attracting investment capital, and constrained supplies failing to meet rising demand. The National Academy of Sciences has called

America's electric system "...the supreme engineering achievement of the 20<sup>th</sup> century."

However, as currently configured, there are serious questions about the ability of this system to satisfy the increasingly complex energy needs of the 21<sup>st</sup> century.

Modernizing the electricity sector is a key component and one of the foremost missions of my Office. To that end, I'm delighted to say that the HTS program had several significant events with the cable projects this year. In January, the Albany Cable was re-energized and ran for approximately 2400 hours with a section fabricated from second generation wire. This was the world's first demonstration of 2G wire in a utility environment.

In April, the LIPA cable was energized; this commissioning signifies a great advance in the technology, as it is the world's first high temperature superconducting transmission cable system to be energized in a commercial power grid. This is quite an achievement and is a testament to the hard work of the project team.

We look forward to hearing the progress on the 2 new cable projects. The New Orleans cable will help Entergy solve real-world electrical congestion near downtown New Orleans. The second phase of the LIPA cable project will replace a phase of the cable with 2 G wire and demonstrate “inherently” fault current limiting capability. These will be important future milestones for the Program and the technology to further demonstrate value to Utilities.

If the previous peer review results are indicators as to the progress our government/industry partnerships are making then I suspect we will also hear much more about new world record results from our HTS wire manufacturers.

HTS technology has a major role to play in the coming years to contribute to system reliability to meet the needs of our consumers. DOE will continue to pursue opportunities to work with you and your colleagues to pursue commercialization of this innovative new technology. To achieve these ends, it is vital for the Federal Government, the state, and private sector stakeholders to continue to work together to leverage resources, address common problems, and help us make sure the tax payers are getting their money's worth.

Once again, thank you for participating in the 2008 Superconductivity Peer Review. We hope you will find the meeting interesting and useful and we look forward to working with you in the future.